



Figure 1

Mouse	MGGCEVREFLLQFGFFLPLLTAWTGDCSHVSN-QVVLLDTTVMGELGWKTYPLNGWDAI	59
Human	MGGCEVREFLLQFGFFLPLLTAWPGDCSHVSNQVVLLDTTVMGELGWKTYPLNGWDAI	60
	*****;*:***** *****;*****	
Mouse	TEMDEHNRPIHTYQVCNVMENQNNWLRTNWISRDAAQKIYVEMKFTLRDCNSIPWVLGT	119
Human	TEMDEHNRPIHTYQVCNVMENQNNWLRTNWISRDAAQKIYVEMKFTLRDCNSIPWVLGT	120
	*****	
Mouse	CKETFNLYIESDESHGTFKFKPSQYIKIDTIAADESFTQMDLGDRILKLNTEIREVGPIE	179
Human	CKETFNLFYMESDESHGTFKFKPNQYTKIDTIAADESFTQMDLGDRILKLNTEIREVGPIE	180
	*****;*:***** *****;*****	
Mouse	RKGFLYAFQDIGACIALVSVRVFYKCPFTVRSLAMFPDTIPRVDSSSLVEVRGSCVKSA	239
Human	RKGFLYAFQDIGACIALVSVRVFYKCPFTVRNLAMFPDTIPRVDSSSLVEVRGSCVKSA	240
	*****;*****	
Mouse	EERDTPKLYCGADGDLVPLGRCICSTGYEEIEGSCHACRPGFYKAFAGNTKCSKCPPHS	299
Human	EERDTPKLYCGADGDLVPLGRCICSTGYEEIEGSCHACRPGFYKAFAGNTKCSKCPPHS	300
	*****	
Mouse	STYVEATSVCHCEKGYFRAEKDPPSMACRPPSAPRNVAFNINETALILEWSPPSDTGGR	359
Human	LTymeatsvcqcekyfRAEKDPPSMACRPPSAPRNVFVNINETALILEWSPPSDTGGR	360
	**;*****;*****;*****	
Mouse	KDLTYSVICKKCGLDTTQCEDCGGLRFIPRHTGLINNSVVVLDVSHVNYTFEIEAMNG	419
Human	KDLTYSVICKKCGLDTSQCEDCGGLRFIPRHTGLINNSVIVLDVSHVNYTFEIEAMNG	420
	*****;*****;*****	
Mouse	VSELSISPFPFTAITVTTDHDAPSLIGMMRKDWASQNSLALSWQAPAFSNGAILDYETKY	479
Human	VSELSISPFPFTAITVTTDQDAPSLIGVVRKDWASQNSIALSWQAPAFSNGAILDYEIKY	480
	*****;*****;*****;*****	
Mouse	YEKEHEQLTYSSTRSKAPSVIVTGLKPATYIFHIRVRTATGYSQKFEFETGDETS	539
Human	YEKEHEQLTYSSTRSKAPSVIITGLKPATKYVFHIRVRTATGYSQKFEFETGDETS	540
	*****;*****;*****	
Mouse	MAEQGQILVIATAAVGGFTLLVILTLFFLITGRCQWYIKAKMKSEEKRRTHLQNGHLRF	599
Human	MAEQGQILVIATAAVGGFTLLVILTLFFLITGRCQWYIKAKMKSEEKRRNHLQNGHLRF	600
	*****;*****	
Mouse	PGIKTYIDPDITYEDPSLAVHEFAKEIDPSRIRIERVIGAGEFGEVCSGRLKTPGKREIPV	659
Human	PGIKTYIDPDITYEDPSLAVHEFAKEIDPSRIRIERVIGAGEFGEVCSGRLKTPGKREIPV	660
	*****	
Mouse	AIKTLKGGHMDRQRDFLEASIMGQFDHPNIIIRLEGVVTKRSPFAIGVEAFCPNFLRAG	719
Human	AIKTLKGGHMDRQRDFLEASIMGQFDHPNIIIRLEGVVTKRSPFAIGVEAFCPNFLRAG	720
	*****	
Mouse	FLNGIQAPHVPVTAGGSLPPRIAPGRPVMIVVEYMENGLSDSFLRKHDGHFTVIQLVGMLR	779
Human	FLNSIQAPHVPVPGGSLPPRIAPGRPVMIVVEYMENGLSDSFLRKHDGHFTVIQLVGMLR	780
	***;*****;*****	
Mouse	GIASGMKYLSDMGYVHRDLAARNILVNSNLVCKVSDFGLSRVLEDDPEAAAYTTGGKIPI	839
Human	GIASGMKYLSDMGYVHRDLAARNILVNSNLVCKVSDFGLSRVLEDDPEAAAYTTGGKIPI	840
	*****	
Mouse	RWTAPEAIAIRKFSSASDAWSYGIVMWEVMSYGERPYWEMSNQDVILSIEEGYRLPAPMG	899
Human	RWTAPEAIAIRKFSSASDAWSYGIVMWEVMSYGERPYWEMSNQDVILSIEEGYRLPAPMG	900
	*****	
Mouse	CPPSLQQLMLHCWQKERNHRPKFTDIVSFLDKLIRNPSALHTLVEDILVMPESPGDVPEY	959
Human	CPASLHQLMLHCWQKERNHRPKFTDIVSFLDKLIRNPSALHTLVEDILVMPESPGEVPEY	960
	**;*****;*****	
Mouse	PLFVTVDWLDLSIKMGQYKSNFMAAGFTTDFLISRMSIDDIRRIGVILIGHQRRIVSSIQ	1019
Human	PLFVTVDWLDLSIKMGQYKNNFVAAGFTTDFLISRMSIDDIRRIGVILIGHQRRIVSSIQ	1020
	*****;*****	
Mouse	TLRLHMMHIQEKGFHV	1035
Human	TLRLHMMHIQEKGFHV	1036
	*****	

FIGURE 2

# Figure 3

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Human: 3   aggacccccatcctacccagaacacctgectgcgtgccgccacttctctttaaggga 62
          ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Mouse: 205 aggacccccacgctactaggaacacctggctgcgtgcgtgccacttctctttaagg---a 261

Human: 63   ggaaaagagagcctaggagaacctggggggctgcgaagtcgggaatttcttttgcaat 122
          ||| ||||| ||| ||| ||||| ||||| ||||| ||||| ||||| |||||
Mouse: 262 ggagaagagaaccaaccagagccatggggggctgcgaagtcgggaatttcttttgcaat 321

Human: 123   ttggtttcttcttgccctctgctgacagcgtggccaggcgactgcagtcacgtctccaaca 182
          ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Mouse: 322   ttggtttcttcttgccctctgctaaaggcttgaccggcgactgcagtcacgtctccaac- 380

Human: 183   accaagttgtgttgcttgatacaacaactgtactgggagagctaggatggaaaacatatc 242
          ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Mouse: 381   --caagttgtgttgcttgatacaaccacagtgatgggagaactaggatggaaaacatatc 438

Human: 243   cattaatgggtgggatgccatcactgaaatggatgaacataataggccattcacacat 302
          ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Mouse: 439   cattaatgggtgggatgccattactgaaatggatgaacacaataggccatacacat 498

Human: 303   accaggtatgtaatgtaatggaaccaaaccaaaacaactggcttcgtacaaactggatct 362
          ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Mouse: 499   accaggtatgcaatgtcatggaaccaaaccagaacaactggcttcgtactaaactggatct 558

Human: 363   cccgtgatgcagctcagaaaatttatgtggaaatgaaattcacactaagggttgtaaca 422
          ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Mouse: 559   ctcgtgatgctgcacagaaaatttatgtggaaatgaaattcacactgagggttgtaaca 618

Human: 423   gcatcccatgggtcttggggacttgcaaagaaacatttaattctgttttatatggaatcag 482
          ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Mouse: 619   gcatcccatgggtcttggggacttgtaaagaaacctttaacctgtattatagaatccg 678

Human: 483   atgagtcacacggaattaaattcaagccaaaccagtatacaagatcgacacaattgctg 542
          ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Mouse: 679   atgaatcccatgggacaaaattcaagccaaaccagtatacaagatcgacacaattgctg 738

Human: 543   ctgatgagagttttaccagatggatttgggtgatcgcatcctcaactcaacactgaaa 602
          ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Mouse: 739   ctgatgagagttttactcagatggatttgggtgaccgcatccttaactcaacactgaaa 798

Human: 603   ttcgtgaggtggggcctatagaaaggaaaggattttatctggcttttcaagacattgggg 662
          ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Mouse: 799   tccgtgaggtggggcctatagaaaggaaaggattttatttggcttttcaagatattggag 858

Human: 663   cgtgcattgccctggtttcagtcctgttttctacaagaaatgcccttcactgttctgta 722
          ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Mouse: 859   catgcatcgctctggtctcagtcctgagttttctacaaaaatgcccttcaccgtgcgga 918

Human: 723   acttgccatgttttctgataccattccaagggttgattcctcctctttggttgaagtac 782
          ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Mouse: 919   gcttggtctatgtttcctgataccatccaagggttgattcctcctctttggttgaagtgc 978

Human: 783   ggggttcttgtgtgaagagtgtgaagagcgtgacactcctaaactgtattgtggagctg 842
          ||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
Mouse: 979   ggggctcatgtgtaaagagtgtgaggagcgagatactcctaaactctactgtggagctg 1038

```







Human: 3483 gggaagtgttcacggacttaacctaaaaaatttatcc--aggtggggcttccttagtga 3540  
||||| ||||| ||||| ||||| ||| | ||| ||| ||| ||| ||  
Mouse: 3678 gggaagtgttcacggacttaacctaaaggaattgtccttaagtgtggcatcttcagaga 3737  
  
Human: 3541 tgtatgtagagtgtgatgtagatgagaaagaactagttgacctttctttcatgttttgt 3600  
|| ||| ||||| ||||| ||||| ||||| || ||| ||| | ||||| ||||| |||||  
Mouse: 3738 cgtgtgtggagtttgatgatagataagaagaaaatagctgatcattcttccatgttttgt 3797  
  
Human: 3601 gatcaagtagct 3612  
|||| |||||  
Mouse: 3798 gatcgagtagct 3809

Figure 4

KSE132	MGGCEVREFLLQFGFFLPLLTAWPGDCSHVSNQVVLDDTTTVLGEIGWKTYPLNGWDAL	60
XM_035574	-----	
KSE132	TEMDEHNRPIHTYQVCNVMEPNQNNWLRTNWNISRDAAQKIYVEMKFTLRDCNSIPWVLGT	120
XM_035574	-----	
KSE132	CKETFNLFYMESEDESHGKFKPNQYTKIDTIAADESFTQMDLGDRILKLNTEIREVGPIE	180
XM_035574	-----	
KSE132	RKGFYLAQDQIGACIALVSVRVFYKKCPFTVRNLAMFPDTPRVDSSSLVEVRGSCVKSA	240
XM_035574	-----	
KSE132	EERDTPKLYCGADGDLVPLGRCICSTGYEEIEGSCHACRPGFYKAFAGNTKCSKCPPHS	300
XM_035574	-----	
KSE132	LTYMEATSVCQCEKGYFRAEKDPPSMACRPPSAPRNVFNINETALILEWSPPSDTGG	360
XM_035574	-----	
KSE132	KDLTYSVICKKCGLDTSQCEDCGGGLRFIPRHTGLINNSVIVLDFVSHVNYTFEIEAMNG	420
XM_035574	-----	
KSE132	VSELSFSPKPFATAITVTTDQDAPSLIGVVVKDWASQNSIALSWQAPAFSNGAILDYEIKY	480
XM_035574	-----	
KSE132	YEKEHEQLTYSSTRSKAPSVIITGLKPKATKYVFHIRVRTATGYSGYSQKFEFETGDETS	540
XM_035574	-----MKXXXXXXXXXXXXXXXXXXXXXSD 26 :: **	
KSE132	MAAEQGGQILVIATAAVGGFTLLVILTLFFLITGRCQWYIKAKMKSEEKRRNHLQNGHLRF	600
XM_035574	MAAEQGGQILVIATAAVGGFTLLVILTLFFLITGRCQWYIKAKMKSEEKRRNHLQNGHLRF 86 *****	
KSE132	PGIKTYIDPDYEDPSLAVHEFAKEIDPSRIRIERVIGAGEFGEVCSGRLKTPGKREIPV	660
XM_035574	PGIKTYIDPDYEDPSLAVHEFAKEIDPSRIRIERVIGAGEFGEVCSGRLKTPGKREIPV 146 *****	
KSE132	AIKTLKGGHMDRQRDFLREASIMGQFDHPNIIIRLEGVVTKRSFPAIGVEAFCPNFLRAG	720
XM_035574	AIKTLKGGHMDRQRDFLREASIMGQFDHPNIIIRLEGVVTKRSFPAIGVEAFCPNFLRAG 206 *****	
KSE132	FLNSIQAPHPVPGGSLPPRIAPGRPVMIIVVEYMENGLSDSLRKHGHTFVIQLVGMLR	780
XM_035574	FLNSIQAPHPVPGGSLPPRIAPGRPVMIIVVEYMENGLSDSLRKHGHTFVIQLVGMLR 266 *****	
KSE132	GIASGMKYLSDMGYVHRDLAARNILVNSNLVCKVSDFGLSRVLEDDPEAYTTTGKIP	840
XM_035574	GIASGMKYLSDMGYVHRDLAARNILVNSNLVCKVSDFGLSRVLEDDPEAYTTTD----- 321 *****	
KSE132	RWTAPEAIAYRKFSASDAWSYGIWMVEVMSYGERPYWEMSNQDVLSIEEGYRLPAPMG	900
XM_035574	-----LFQTLTLNLCYSA----- 334 *.: : .*	
KSE132	CPASLHQLMLHCWQKERNHRPKFTDIVSFLDKLIRNPSALHTLVEDILVMPESPGEVPEY	960
XM_035574	-----	
KSE132	PLFVTVGDWLDSIKMGQYKNNFVAAGFTTDFDLISRMSIDDIRRIGVILIGHQRRIVSSI	1020
XM_035574	-----	
KSE132	TLRLHMMHIQEKGFHV	1036
XM_035574	-----	